IN THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application.

Claims 1-6 (Canceled).

7. (Currently Amended) A semiconductor laser apparatus comprising:

a semiconductor laser;

a light intensity detector configured to detect ~~detection element for detecting the~~ intensity of ~~output light~~ a laser beam output from the semiconductor laser;

an amplifying circuit ~~having~~ including a non-reversal input terminal and a reversal input terminal that are each configured to ~~which~~ receive predetermined input signals ~~are respectively input~~, ~~and to~~ the reversal input terminal[[,]] being further configured to receive an output signal from the light intensity detector ~~detection element is input~~ as a negative feedback signal;

a high-frequency signal generating circuit configured to generate a high-frequency signal having a predetermined frequency;

a high-frequency signal superimposing circuit configured to superimpose the high-frequency signal onto an output signal of the amplifying circuit;

a laser drive circuit configured to supply ~~for supplying~~ a drive current to the semiconductor laser on the basis of ~~the~~ an output signal from the amplifying circuit having the superimposed high frequency signal thereon; and

a modulation signal current generating section configured to apply ~~for outputting~~ a modulation signal current to the reversal input terminal of the amplifying circuit so as to

adjust ~~for adjusting~~ an amount of ~~output~~ laser beam light ~~of~~ from the semiconductor laser ~~to the reversal input terminal of the amplifying circuit~~.

8. (Currently Amended) A semiconductor laser apparatus according to claim 7, wherein the modulation signal current generating section includes a switch element and a current source connected in series[[,]] between the reversal input terminal of the amplifying circuit and a ground node, the switch element being configured to be intermittently controlled by a modulation signal ~~for controlling the~~ applied thereto to control switching of irradiation of ~~a~~ the laser beam ~~by~~ from the semiconductor laser to perform the adjustment of the amount of laser beam light.

9. (Currently Amended) A semiconductor laser apparatus according to claim 7, wherein the modulation signal current generating section includes a switch element and a current source connected in series[[,]] between the reversal input terminal of the amplifying circuit and a ground node, the switch element comprising two transistors ~~constituting~~ configured as a differential pair[[,]] ~~and~~ having differential input terminals configured to ~~which~~ receive modulation signals ~~for~~ configured to control differential pair switching to provide intermittent current from the current source to the reversal ~~are~~ input terminal of the amplifying circuit to perform the adjustment of the amount of laser beam light.

10. (Currently Amended) A semiconductor laser apparatus according to claim 7, wherein the modulation signal current generating section includes a current-current conversion circuit configured to current-to-current convert ~~for converting in a current-to-current manner~~[[,]] a control input signal from outside[[,]]and to output ~~outputting~~ a current-

to-current converted signal to the reversal input terminal of the amplifying circuit to perform the adjustment of the amount of laser beam light.

11. (Currently Amended) A semiconductor laser apparatus according to claim 7, wherein the modulation signal current generating section includes:

a first current-current conversion circuit ~~for receiving~~ configured to receive a control input signal from outside[[,]] and ~~for supplying~~ to supply a first current-current converted ~~conversion~~ output to the reversal input terminal of the amplifying circuit in response thereto; and

a second current-current conversion circuit ~~for receiving~~ configured to receive the first current-current converted ~~conversion~~ output from the first current-current conversion circuit[[,]] and ~~supplying~~ to supply a drive voltage ~~for controlling~~ responsive thereto to control the driving of the laser drive circuit to perform the adjustment of the amount of laser beam light.

12. (Currently Amended) A semiconductor laser apparatus according to claim 7, wherein the modulation signal current generating section includes:

a switch element[[,]] configured to receive and to be intermittently controlled by a modulation signal ~~for controlling the~~ so as to provide on/off switching ~~of irradiation of a the laser beam by the semiconductor laser~~, and

a voltage-current conversion circuit[[,]] ~~which are~~ connected in series with the switch element between the reversal input terminal of the amplifying circuit and a ground node, wherein

the switch element on/off switching provides an output current from the voltage-current conversion circuit to the reversal input terminal of the amplifying circuit to perform the adjustment of the amount of laser beam light.

13. (Currently Amended) A semiconductor laser apparatus according to claim 7, further comprising:

a reference voltage generating circuit; and

input resistors, each input resistor having substantially a same resistance value[[,]] and being respectively connected between an output terminal of the reference voltage generating circuit and ~~each~~ a respective one of the non-reversal input terminal and the reversal input terminal of the amplifying circuit.

14. (Currently Amended) A semiconductor laser apparatus according to claim 13, wherein the amplifying circuit includes:

a gain controllable operation amplifying circuit having ~~a~~ the non-reversal input terminal and ~~a~~ the reversal input terminal, each terminal being further configured to ~~which the~~ receive a respective reference ~~voltages are input respectively via~~ voltage from a respective one of the input resistors as at least part of each of the predetermined input signals, ~~and to the reversal input terminal, an output signal of the light intensity detection element being input as a negative feedback signal~~; and

a gain-fixed type control amplifying circuit ~~connected to~~ configured to connect a next stage to the gain controllable operation amplifying circuit.

15. (Currently Amended) A semiconductor laser apparatus according to claim 7, further comprising:

a level shift circuit ~~for shifting~~ configured to shift a level of a reference voltage input to provide a shifted output; and

input resistors having substantially a same resistance value, ~~and respectively~~ each input resistor being connected between an output terminal of the level shift circuit and ~~each~~ a respective one of[[,]] the non-reversal input terminal and the reversal input terminal of the amplifying circuit so that the shifted output passed by each respective input resistor will provide at least part of each of the predetermined input signals.

16. (Currently Amended) A semiconductor laser apparatus according to claim 15, wherein the amplifying circuit includes:

a gain controllable operation amplifying circuit having ~~a~~ the non-reversal input terminal and ~~a~~ the reversal input terminal[[,]] ~~to which the a voltage obtained by shifting the level of the reference voltage input is input respectively, via the input resistors, and to the reversal input terminal, an output signal of the light intensity detection element being input as a negative feedback signal~~; and

a gain-fixed type control amplifying circuit ~~connected to~~ configured to connect a next stage to the gain controllable operation amplifying circuit.

17. (Original) A semiconductor laser apparatus according to claim 7, further comprising:

a level shift circuit connected between the amplifying circuit and the laser drive circuit.

18. (Canceled).

19. (Currently Amended) An information recording/reproducing apparatus comprising:

a semiconductor laser apparatus including[[:]],

a semiconductor laser[[;]],

a light intensity detector configured to detect ~~detection element for detecting the~~ intensity of ~~output light~~ a laser beam output from the semiconductor laser[[;]],

an amplifying circuit ~~having~~ including a non-reversal input terminal and a reversal input terminal that are each configured to ~~which~~ receive predetermined input signals ~~are respectively input, and to~~ the reversal input terminal[[,]] being further configured to receive an output signal from the light intensity detector ~~detection element is input~~ as a negative feedback signal[[;]],

a high-frequency signal generating circuit configured to generate a high-frequency signal having a predetermined frequency,

a high-frequency signal superimposing circuit configured to superimpose the high-frequency signal from the high-frequency generating circuit onto an output signal of the amplifying circuit,

a laser drive circuit configured to supply ~~for supplying~~ a drive current to the semiconductor laser on the basis of the output signal from the amplifying circuit having the superimposed high frequency signal thereon[[;]], and

a modulation signal current generating section configured to apply ~~for outputting~~ a modulation signal current to the reversal input terminal of the amplifying circuit so as to adjust ~~for adjusting~~ an amount of ~~output~~ laser beam light ~~of~~ from the semiconductor laser ~~to the reversal input terminal of the amplifying circuit~~;

an optical system ~~for irradiating~~ configured to irradiate ~~output light~~ the laser beam from the semiconductor laser apparatus onto a recording medium;

a detection section ~~for detecting reflection~~ configured to detect laser beam light reflected from the recording medium and to provide an output based thereon;

a reproduction signal generating section ~~for generating~~ configured to receive the output from the detection section and to generate a reproduction signal based ~~on an output from the detection section~~ thereon; and

a control signal generating section ~~for generating the~~ configured to generate a control signal to be supplied to the semiconductor laser apparatus.

20. (Canceled)

IN THE DRAWINGS

The attached sheets of drawings include changes to Fig. 7, 9, and 11 . These sheets, which include Fig. 7, 9, and 11, replace the original sheets including Fig. 7, 9. and 11.

Attachment: Replacement Sheets